



A00991 (11)

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PJSC DNIPROSPETSSTAL, YUZHNOYE SHOSSE 81, 69008 ZAPOROZHYE, UKRAINE

	Contract No.: 20002 TECHN.PROTOCOL № 390-11 SPEC.№ 3734/P033051-ED DIN EN 10088-3-05, DIN EN 10272-08, DIN EN 10222-5-00, ASTM A182/A182M-10; ASME SA-182/SA-182M-10; ASTM A276-10; ASTM A314-08, ASTM A479/A479M-10; ASME SA-479/SA-479M-10; ASTM A484/A484M-10; AMS-QQ-S-763B-06 Cond.A; AMS 5648K-07; AMS 5653F-07; ASTM A193/A193M-10GR B8M, CL1; ASME SA 193/SA-193M-10 GR B8, CL 1; ASTM A320/A320M-08 GR B8M, CL 1; ASME SA-320/SA-320M-10 GR B8, CL1; NACE MR 0175-03; NACE MR 0103-10	INSPECTION CERTIFICATE EN10204/3.1 Nr.286162 PLANT ORDER № 8014903734
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 <p>GMS Certified</p>	PRODUCT DESCRIPTION Bars and rods of corrosion-resistant (stainless) steel forged, peeled. Прутки из коррозионностойких (нержавеющих) сталей кованные, обточенные. STEEL MAKING PROCESS: EAF+AOD СПОСОБ ВЫПЛАВКИ: Электродуговая печь+АКР Round 11.000in/279.40 mm L=3.820m/12.525ft ; L=3.960m/12.984ft Grade: 316/316L/1.4401/1.4404	QUANTITY: 1bund Q-4233 lb/1920 kg (number of pcs) 1bund Q-4374 lb/1984 kg
		Delivery condition solution annealed : 1904° F(1040°C) water 30minutes термообработка: закалка в воду

ANALYSIS, %	C	Si	Mn	P	S	Cr	Ni	Mo	Al	Cu	V	W	Ti	Co	Nb	N ₂	Sn	B
REQUIRED	<.030	<1.00	1.20-2.00	<.040	.015-.030	16.50-18.00	10.00-13.00	2.00-2.50	<.10	<.40	<.10	<.20	<.15	<.40	<.20	<.10		
CAST № A00991	.018	.36	1.36	.034	.026	16,67	10.41	2.06	.066	.24	.04	.13	.005	.07	.01	.032	.011	.001

DIN EN 10002-1, ASTM A370-09										TECHNICAL REQUIREMENTS: Macrostructure – GOOD GRAIN SIZE : 5 to ASTM E 112-96(2004) Nonmetallic inclusions ASTM E 45-05 (Method A) A B C D thin thick thin thick thin thick thin thick 2.5 2.0 2.5 2.0 0.0 0.0 1.0 1.0 ICC-ASTM A262-08 (practice E)-test: O.K. Dimension/surface defects test, anti-mixing test – OK									
MECHANICAL PROPERTIES	Yield Strength, (N/mm ²) R0.2% R 1.0%		Tensile Strength, Rm, (N/mm ²)	Elongation		Reduction of area, Z % L	Brinell Hardness HB	Impact strength, KV, J											
	L	Q		A ₅ %	In 2 inches (50mm) or 4D, min, % L			L	Q										
REQUIRED	205	240	515-690	45	35	40	50	140-223	100										
EFFECTIVE	297 300	312 319	572 574	59	55	58	73	167	274 272 270 267 264 260	63 63 64 62 62 63									

Mechanical properties tested in state of delivery		
US - testing	yes	Results: ASME SA-388/SA-388M-10 (ASTM A 388/A 388M-09)-FBH1/5"; EN 10228-4 type 1a; class 3:OK
Radiation free; mercury free. No Weld or Weld repair.		
Manufacturer: PJSC DNIPROSPETSSTAL Date: 18.07.14 Manager of quality assurance department - V. Kapaieva Signed: 		Zaporozhye Made in Ukraine.